

ABSTRACT

An arrangement for supplying current to the solenoid valves of an electrohydraulic valve-timing system of an internal combustion engine in a controllable manner has solenoid valves assigned to the gas-exchange actuators. A two-stage supplying of voltage is provided for the solenoid valves, i.e., the supplying of an inrush voltage from an inrush voltage source, and the supplying of a holding voltage from a holding voltage source. In this context, the inrush voltage is greater than the holding voltage. The solenoid valves may be actuated independently of one another for the duration of an inrush current time by an inrush current that corresponds to the applied inrush voltage, and for the duration of a holding current time by a holding current that corresponds to the applied holding voltage. For each solenoid valve, one holding voltage line and one inrush voltage line are provided, which connect the solenoid valve to the holding voltage source and to the inrush voltage source, respectively. From each solenoid valve, a ground lead leads to ground, a ground lead disconnecter being provided in the ground lead for switchably disconnecting the electrical connection between the solenoid valve and ground.